

A Busy Landscape Leaves No Room for Coal in the Rocky Mountains

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Coal Valley
Landsat Imagery 1984 - 2020



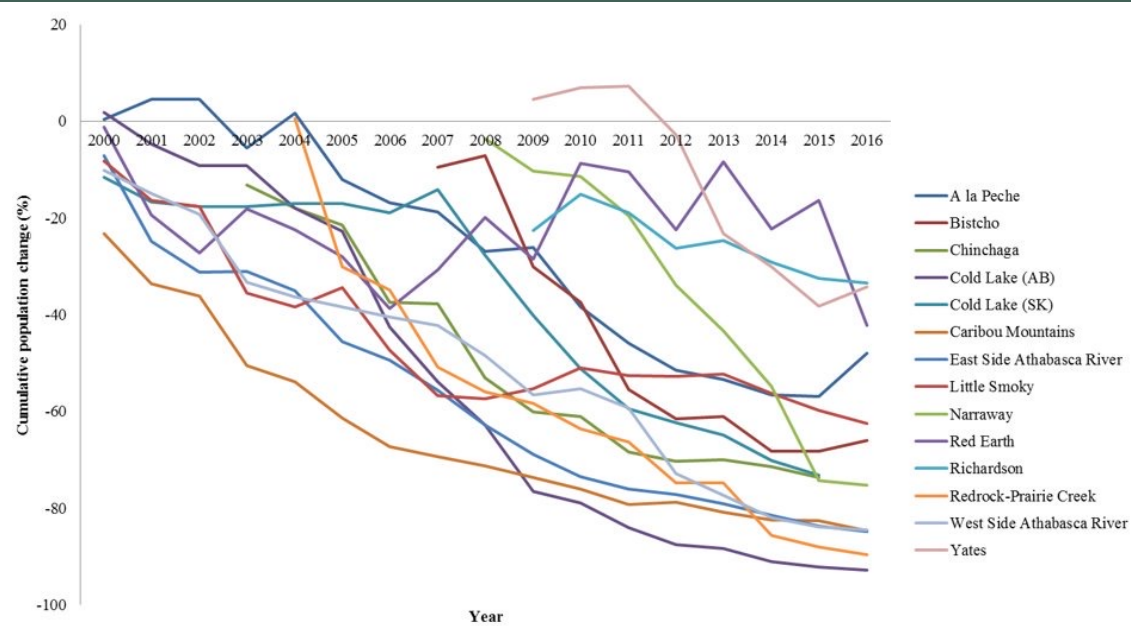


Figure 1. Cumulative population change calculated from annual lambda estimates for 14 woodland caribou populations in Alberta from 2000 to 2016. Cumulative population change is shown only for years in which estimates were available.

15 woodland caribou herds on provincial lands.

Population estimates for herds vary from about **55 individuals to 400** individuals in a herd.

One study estimates that herds in Alberta are declining at 50% every 8 years (Hervieux et al. 2015)

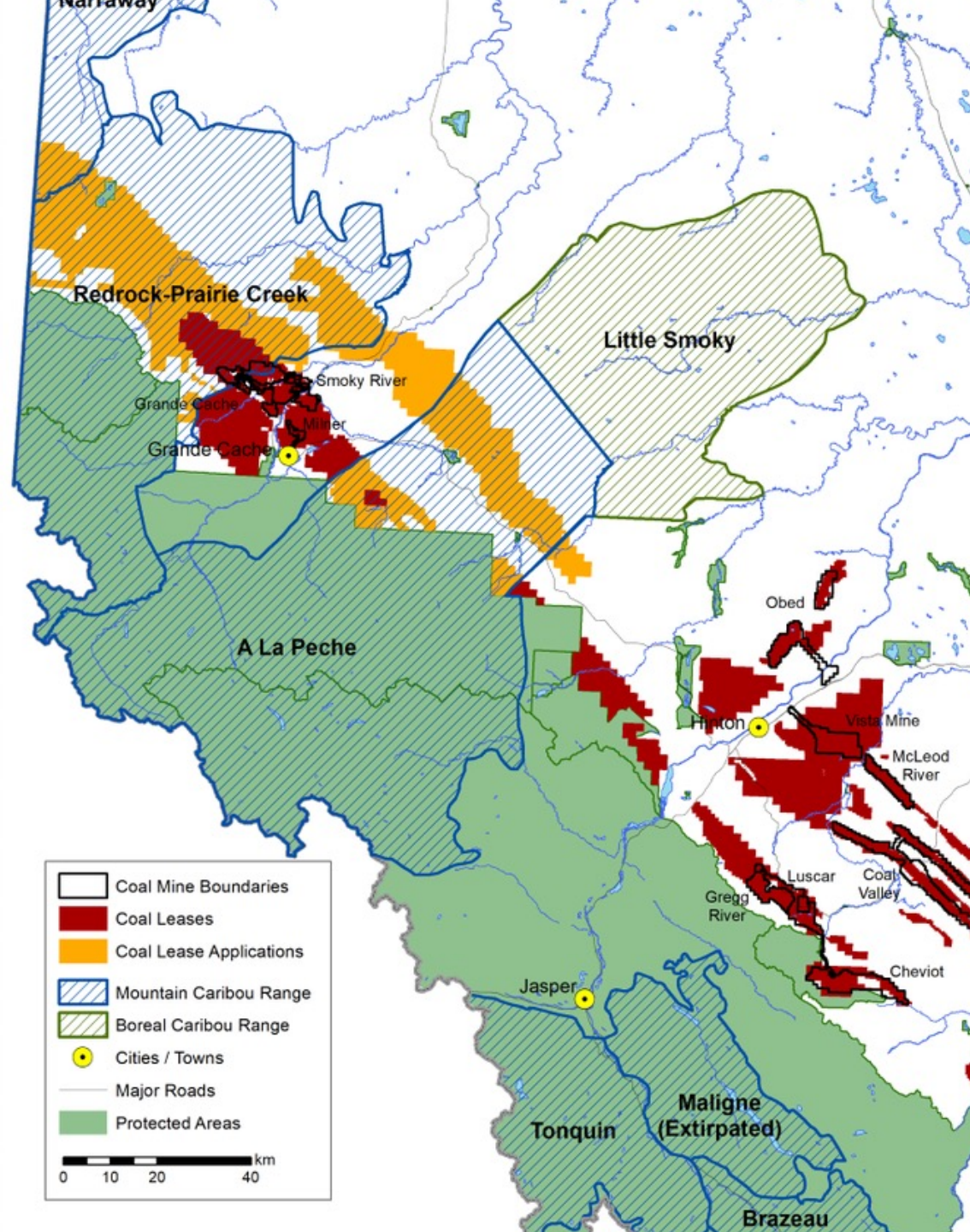


Woodland Caribou Strategies

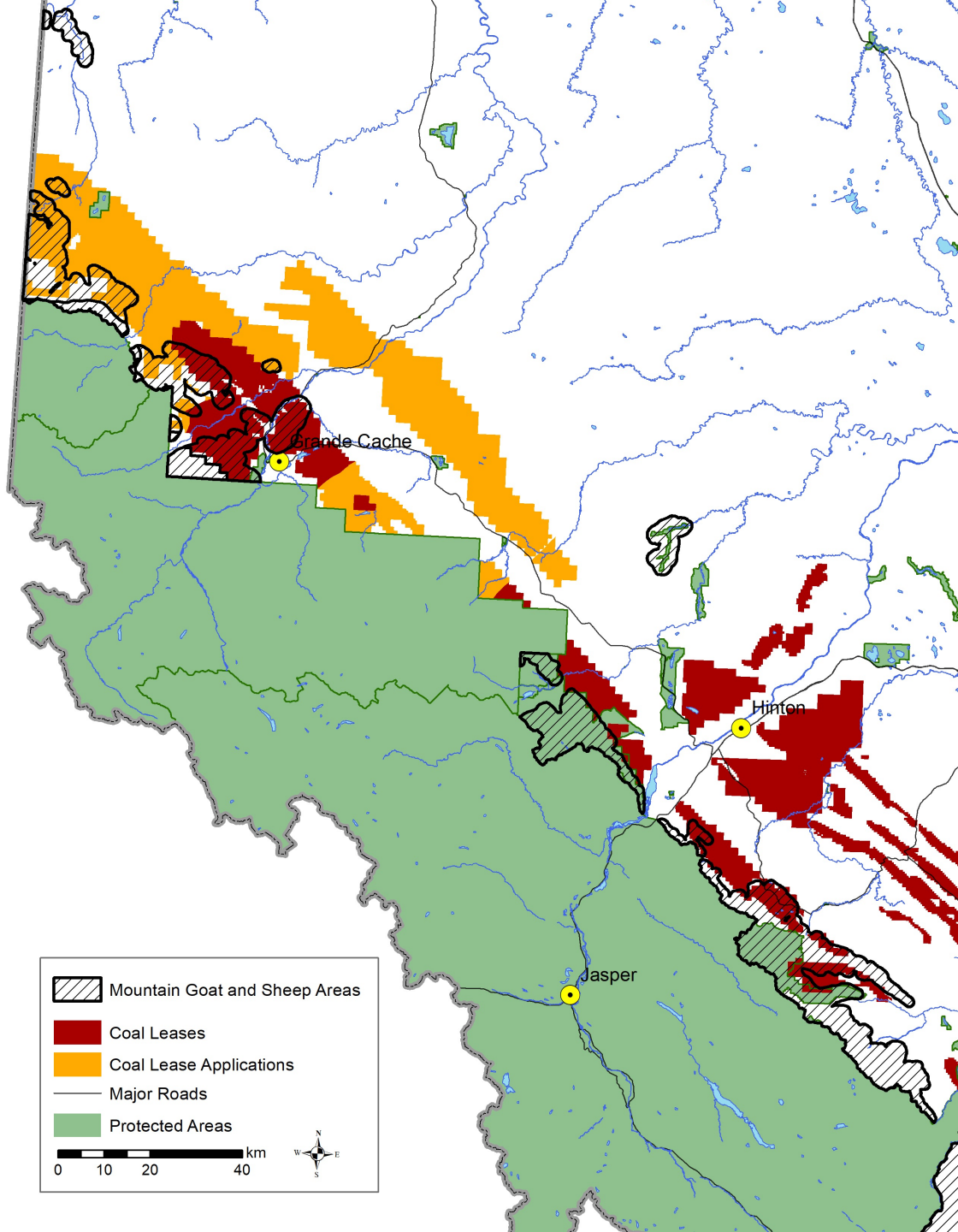
- Caribou have particular needs, large intact forest, and connected undisturbed habitat, and are sensitive to changes, meaning they are a good indicator of a healthy ecosystem.

- Caribou are losing habitat at accelerating rates even today (Serroya et al 2021)

- The disturbance in Southern Mountain Caribou is fundamentally changing these herds. They are migrating less, and using less of their range to avoid being in disturbed areas, causing range retraction and their strategies to fail (Williams et al 2021)

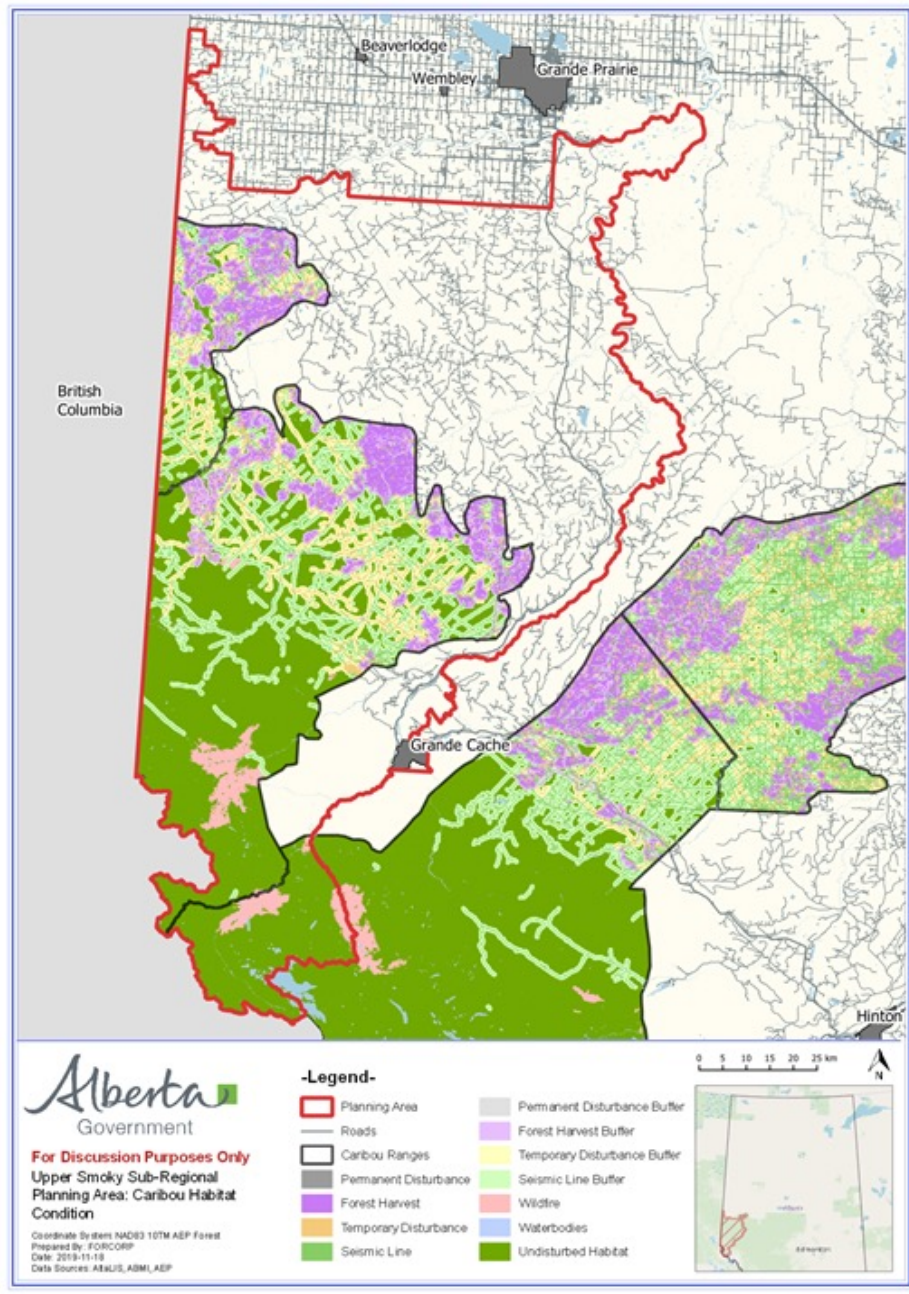


3 caribou ranges overlap with coal interest in the region of interest



The region is also home to mountain goat and sheep habitat

Critical Habitat for Athabasca Rainbow Trout

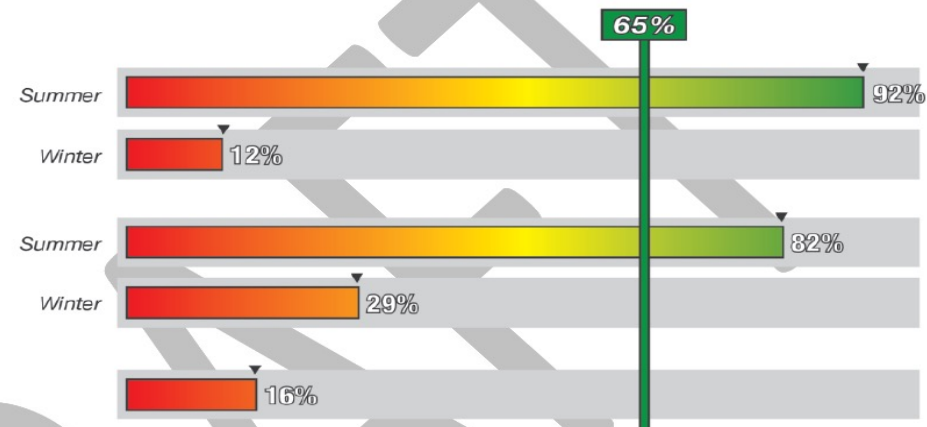


MOVING TOWARDS
65% UNDISTURBED CARIBOU HABITAT
Southern Mountain Caribou Ranges

A LA PECHE

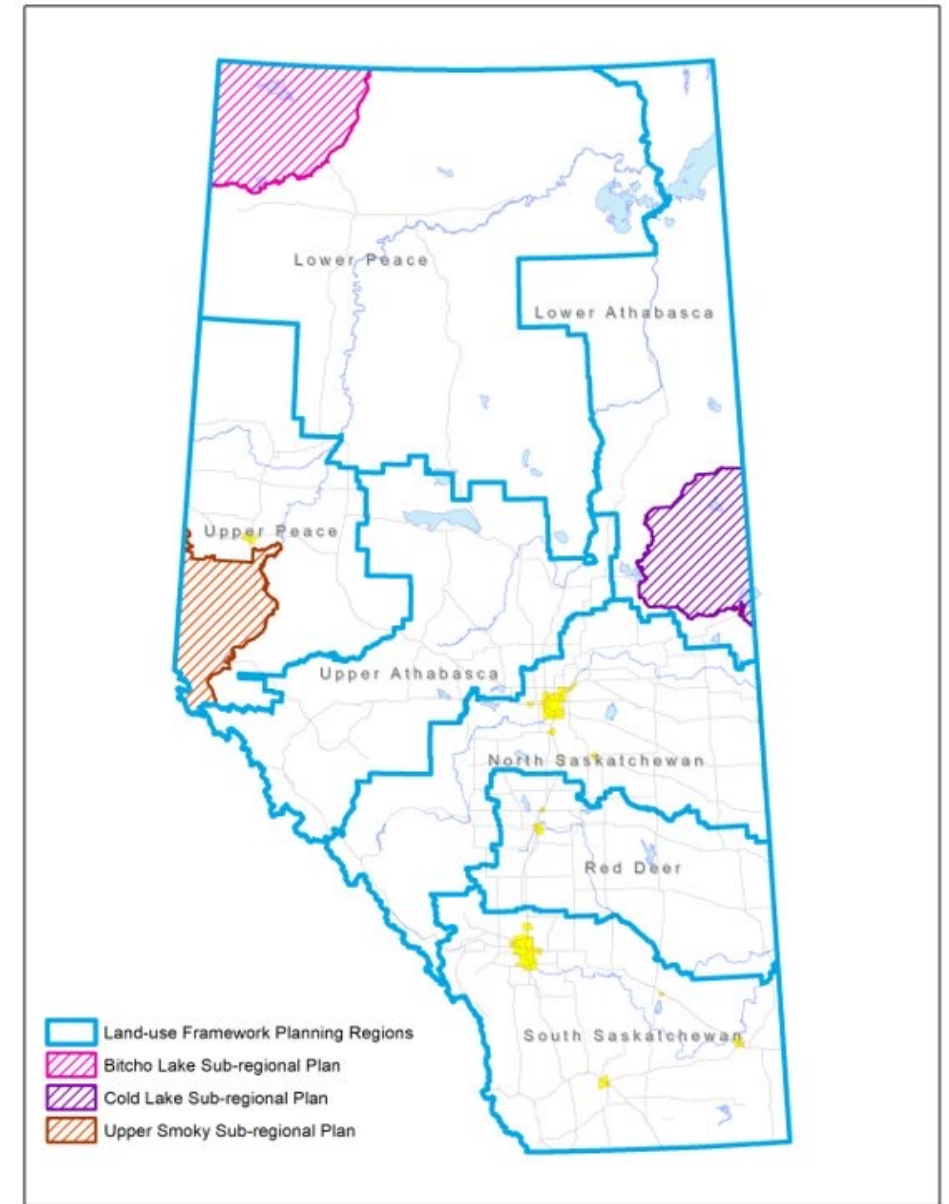
REDROCK PRAIRIE CREEK

NARRAWAY



Upper Smoky Sub-Regional Land use plan

Because no land use plans have adequately addressed coal, and because the committee has made it clear that the policy will not consider land use plans, new coal development is unacceptable on this landscape. The sub-regional plans are meant to address immediate and long-term habitat and population objectives for caribou recovery, while also supporting positive local economic, environmental, social, and recreational outcomes.



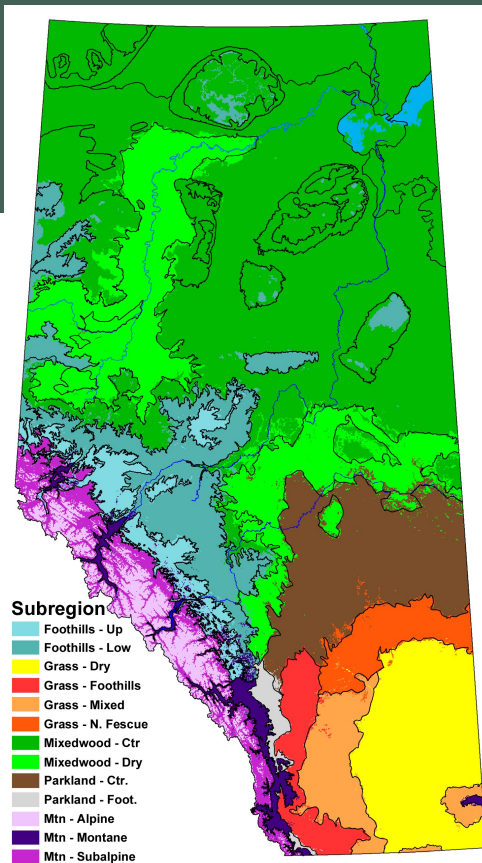
Climate Refugia

Climatic refugia are habitats that components of biodiversity retreat to or persist in under changing environmental conditions (Keppel et al., 2012).

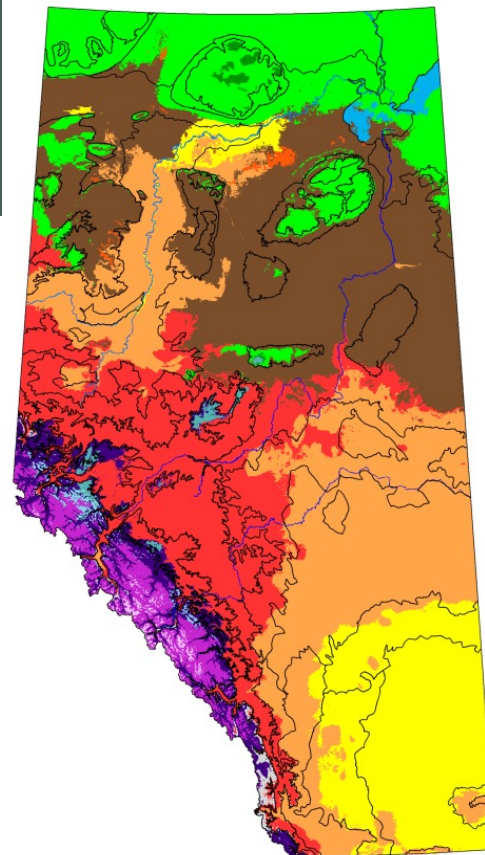
The regions being considered by the coal policy are also present opportunities for climate refugia.

Climate refugia are areas that are less likely to warm on a warming planet therefor provide habitat certainty for species in the province

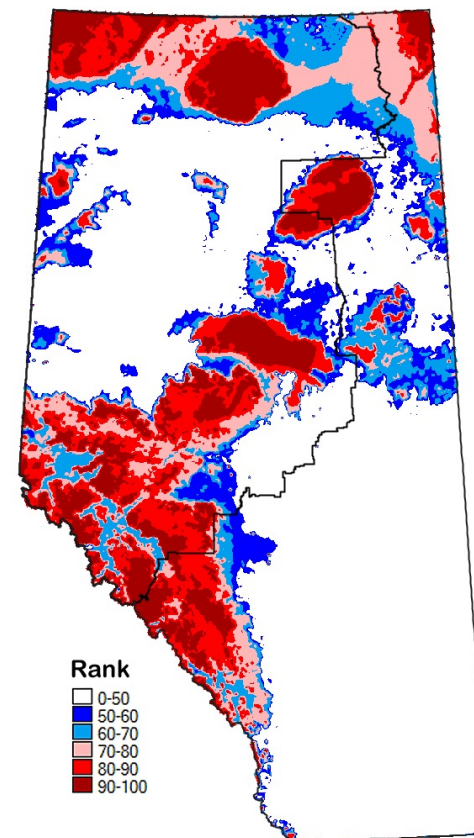
The foothills and rocky mountains have been identified as important climate refugia for boreal bird species, trout, and when modeled are regions that experience less extreme changes than others



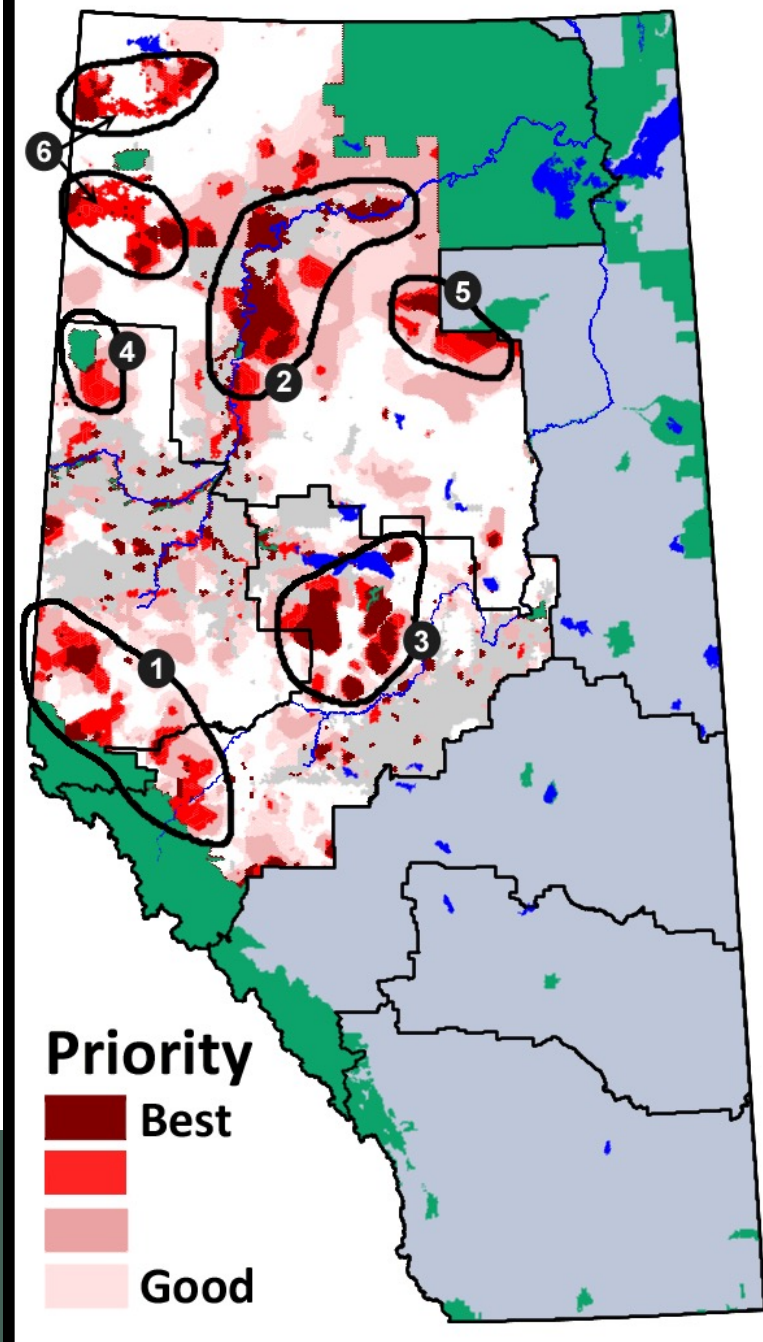
Natural subregions under the Foothills Bioclimatic Envelope Model, using climate data from the 1961-1990 reference period as input



Foothills Bioclimatic Envelope Model for the 2080s: Median model



Priority areas for boreal forest birds based on species-based modeling of climate refugia (Stralberg et al., 2015).



Prioritizing Places for Conservation

Northern Alberta Conservation Area Working Group's 2016 report identified the northern foothills as priority areas for conservation

Conservation Planning in Northwest Alberta, Northern Alberta Conservation Area Working Group, 2016





A landscape
oversubscribed